

PETITION
OF
WILLIAM JENKS,

PRAYING

That a portion of the arms furnished to the States and Territories may be of his improved patent fire-arm.

JANUARY 3, 1849.

Referred to the Committee on the Militia, and ordered to be printed.

To the Honorable the Senate and House of Representatives of the United States of America in Congress assembled :

The petition of William Jenks, of Herkimer county, in the State of New York,

RESPECTFULLY SHOWETH :

That your petitioner is the inventor and patentee of an improved fire-arm for military purposes, a description of which will be found in the papers annexed. A better knowledge, however, of the invention and improvement may be obtained by an inspection and examination of one of the carbines made by your petitioner for the navy and revenue marine, to which he respectfully refers.

That in the year 1842, having submitted his improvement to the Department of War, a board of officers of the army was assembled at Fort Adams, by order of the general-in-chief, with directions "to test the length, force, and accuracy of the range of fire, the number of discharges that may be conveniently made in a minute by a man ordinarily skilled in the use of fire-arms, the efficiency and durability of the machinery (including the lock,) used in loading and firing the weapon, and generally its adaptation to war purposes, and to what extent." The order also gives some details as to the manner in which the experiments were to be made.

That the result of the trial thus ordered was most satisfactory, as will fully appear by the report of the officers composing the board, viz : Major Payne and Captain Lowd, of the 2d regiment of artillery, and Captain Thornton and Lieut. Kingsbury, of the ordnance.

Their report states that four carbines were used in the experiments, and that the firing was executed by men taken promiscuously from the companies, at a target of well seasoned white oak. The length, force and accuracy of the range of fire is shown by a table, in which the distance of the target, the charge of powder, and the penetration of the shot are given. At the distance of three hundred feet, or one hundred yards

with a charge of fifty grains, the penetration of a half ounce ball into the target was one and a half inches ; and at nine hundred feet, or three hundred yards, with a charge of sixty-five grains, the penetration was half an inch. In the trial against time, one of the carbines used was fired six times in one minute and a half; the others took somewhat longer. With one of them sixty rounds were fired and the piece cleaned in sixteen minutes and a half. One of the carbines was fired four thousand five hundred rounds without sustaining any injury, except a slight opening in the stock in the vicinity of the lock in consequence of the heat. The balls used in these discharges were kept wet, and sixty rounds were fired without a failure by caps which were immersed in water, which would show the arm to be efficient in an ordinary rain storm. The report then states, that " after witnessing all the performances of the arm, the simplicity of its machinery, the ease with which it may be used, and the certainty of its effect, the board are fully of the opinion that it is well adapted to and capable of performing all the requirements of the service, and that it is believed that the test to which the carbine has been subjected could not be sustained by any similar arm now in use, without greatly injuring or deranging its machinery, or rendering the weapon entirely useless." The board recommend it for dragoon service, and state that it may be made to assume a formidable character as an arm for artillery, by which a fire might be kept up during the intervals whilst the men were not engaged in serving the gun, and that it might take the place of the sword with musicians, as it may be worn with equal ease, and is superior to the sword in efficiency. It had also claims on the score of economy in ammunition, sixty five grains of powder being amply sufficient for a charge, as the ball being slightly larger than the calibre of the piece, it slugs through the bore ; all windage is therefore destroyed, and the maximum effect of the powder produced. After suggesting some alterations to facilitate the use of the piece, and add to its efficiency, the board in conclusion " unhesitatingly recommend that Jenks's carbine be introduced into the service of the United States." General Scott, in transmitting the report to the Secretary of War, states that he has read it with *great interest, and concurs in the conclusions of the board.* (See the report, appendix No. 1.)

Your petitioner further sheweth, that subsequently to this report, the Secretary of War directed that the experiment with one of the carbines should be continued and persevered in until it should be worn out or rendered useless. That the board accordingly proceeded to execute this order, and made their report, in which they state that one of the carbines was fired *fourteen thousand eight hundred and thirteen times* with ball, and a charge of fifty-two grains of powder, that being considered sufficient for general service, and that with certain slight injuries to the nipple and the bridle of the lock surrounding a screw at the close of the firing, which could easily be repaired and remedied, by giving additional strength in future, the other parts of the carbine were in good order and serviceable. In conclusion, they further state, that with the repairs of the nipple and bridle of the lock, they should consider the carbine as still capable of sustaining a great number of discharges. This report is made by Captain Lowd, of the 2d regiment, and Lieut. Aisquith, of the 1st regiment of artillery. General Scott's endorsement on the report is as follows: " *This very remarkable report in favor of Jenks's carbine, showing its durability, is respectfully laid before the Secretary.*" (See report, appendix No. 2.)

Your petitioner also refers to reports of the Franklin Institute of Pennsylvania, and the Mechanic's Association of Massachusetts; to a memorandum of certain experiments made at Carlisle barracks; to a report by a joint board of officers of the army and navy to the Secretaries of these departments, made in 1845; and to a certificate of the officer in charge of the revenue marine, and to various letters from officers and gentlemen who have used the arm; all speaking in the highest terms of the improvement.

He further respectfully sheweth, that he has supplied the navy and revenue marine with carbines of his construction, and that they have received the approbation of these departments, and given satisfaction; and he appeals with confidence to this fact, and the length of time they have been used in these services, as satisfactorily showing their efficiency, safety, durability, and advantages over other fire-arms.

That for carbines of the same pattern as those furnished to the navy and revenue marine, your petitioner is willing, if a considerable number were ordered, to furnish them with *steel* barrels at \$14 a piece, and if the barrels were rifled, at \$15 each.

That by the act of Congress relating to the arming and equipping of the militia, arms of different kinds are distributed to the various States and Territories in proportion to the number of the militia in each; that under this law the muskets which have been heretofore supplied have been, for the most part, heavy muskets, and your petitioner would venture respectfully to suggest, that it would be for the advantage of the service to substitute some of a lighter weight, with percussion locks, and of approved construction for dragoons, artillery, and riflemen.

He therefore respectfully prays that your honorable House would take this subject into consideration, and if you should deem it proper, direct by law that some portion of the arms supplied to the States and Territories should be of his improved construction, and which he would undertake to furnish at the prices before mentioned; and that your honorable House should take any other measure, if you shall so deem fit, for the purpose of introducing these arms into the service of the United States.

And your petitioner will ever pray.

WM. JENKS.

APPENDIX.

No. 1.

FIRST OFFICIAL REPORT ON JENKS'S CARBINE.

SPECIAL ORDER, }
No. 27.

ADJUTANT GENERAL'S OFFICE,
Washington, April 8, 1842.

A board of officers will assemble at Fort Adams, R. I., on the 19th instant, for the purpose of testing the merits of Jenks's carbine, and reporting upon its adaptation to service. Detailed instructions as to the mode of conducting the experiments will be laid before the board.

The board will be composed of Major M. M. Payne, 2d artillery, Captain Allen Lowd, 2d artillery, and Captain W. A. Thornton, ordnance department. Second Lieutenant C. P. Kingsbury, of the ordnance department, will record the proceedings of the board.

By command of Major General Scott.

L. THOMAS,
Assistant Adjutant General.

Aggreeably to the preceding order the board met at Fort Adams, R. I., on the 20th instant.

The President of the board submitted the following letter of instructions:

ADJUTANT GENERAL'S OFFICE,
Washington, April 8, 1842.

SIR: The trial of Jenks's carbine, at Fort Adams, on the 19th instant, is intended to "test the length, force, and accuracy of the range of fire; the number of discharges that may be conveniently made in a minute, by a man ordinarily skilled in the use of fire-arms; the efficiency and durability of the machinery, including the lock used in loading and firing the weapon; and generally, its adaptation to war purposes, and to what extent; one of the carbines to be fired as long as it will bear firing."

To accomplish these objects, the carbines will be fired at various distances from a target, from 100 yards to 150, 200, 250, and 300 yards. To ascertain their force or penetration, dry, sound, white oak plank should be used for the target; in short, charge of powder and ball be carefully weighed. A few rounds should be fired at the distance of ten feet from the target, in order to compare the penetration with that of other fire-arms already known.

A careful record will be kept, embracing every incident or occurrence, such as snaps, exploding only the cap, or a failure of the cap, the breaking of any part, the necessity of cleaning or washing out the barrel, the hits or misses of the target; in short, everything pertaining to the trial, of whatever number of rounds may be fired, and whatever number of arms tried. The arms will be numbered previous to trial, and their performances noted with reference to their numbers.

I am, sir, very respectfully, your obedient servant,

L. THOMAS,
Assistant Adjutant General.

Major M. M. PAYNE, 2d artillery,
President Board of Officers, Fort Adams, R. I.

The results of the experiments instituted by the board for the purpose of testing "the length, force and accuracy of the range of fire," are given in detail in the following table. The target employed was 7 feet long, 2 feet 8 inches wide, and $2\frac{1}{2}$ inches thick, of well-seasoned white oak. The firings were executed by men, taken promiscuously from the companies; the powder was of good quality, and the caps such as are ordinarily used in sporting.

Table of Experiments.

Range, feet.	Powder, grs.	Ball, ounce.	Penetration, inches.	Cleaning.	Remarks.
10	45	1	$2\frac{1}{4}$	0	April 20. Weather fair, wind light, S. W. The "bull's eye" pierced once at the respective distances of 300, 450, and 600 feet. At the distance of 300 feet, four balls passed through the target. During the firing of 61 rounds on the 20th, the pieces were not cleaned.
10	50	1	$2\frac{3}{4}$	0	
10	55	1	$2\frac{3}{4}$	0	
10	60	1	$2\frac{3}{4}$	0	
10	65	1	$3\frac{1}{4}$	0	
10	70	1	$3\frac{1}{4}$	0	
20	45	1	$2\frac{1}{4}$	0	
20	50	1	$2\frac{1}{2}$	0	
20	55	1	$2\frac{3}{4}$	0	
20	65	1	$3\frac{1}{4}$	0	
30	65	1	$3\frac{1}{4}$	0	April 21. Weather fair, wind strong, S. W.
90	50	1	$2\frac{1}{4}$	0	
90	60	1	$2\frac{1}{2}$	0	
150	50	1	$1\frac{3}{4}$	0	
300	50	1	$1\frac{1}{2}$	0	
300	65	1	$1\frac{1}{2}$	0	
450	50	1	$1\frac{5}{6}$	0	
450	65	1	1	0	
600	50	1	$\frac{3}{4}$	0	
600	65	1	$1\frac{3}{6}$	0	
600	70	1	$1\frac{3}{8}$	0	
750	65	1	$\frac{3}{4}$	0	
900	65	1	$\frac{1}{2}$	0	

In these experiments, four carbines were used.

No. 2 was fired 96 times.

No. 5 was fired 74 times.

No. 6 was fired 61 times.

No. 10 was fired 97 times.

Whole number of fires, 329.

FIRING AGAINST TIME.

First Trial.

Carbine No. 2 was discharged 6 times in 2 minutes and 20 seconds, including 2 snaps.

No. 5 was discharged the same number of times in 1 minute and 30 seconds; and the time of discharging 6 rounds from No. 10 was 2 minutes and 15 seconds.

Second Trial.

No. 2 was fired 6 times in three minutes, 1 explosion; No. 5 was fired 6 times in 1 minute and 21 seconds; No. 10 was fired 6 times in 2 minutes and 11 seconds.

The delay in firing No. 2 was due to foulness between the *strut* and the groove in the stock, preventing the lever from closing. This arose from a defect in the finish, which was immediately remedied by deepening the groove with a chisel.

In determining the number of discharges that one of the carbines is capable of sustaining, 60 rounds were fired and the piece cleaned in $16\frac{1}{2}$ minutes.

The result of the experiment "to fire one of the carbines as long as it will bear firing," is given below:

On the 20th, No. 6 was fired	-	-	-	61 times.
" 21st, " "	-	-	-	639 "
" 22d, " "	-	-	-	1,000 "
" 23d, " "	-	-	-	1,300 "
" 25th, " "	-	-	-	1,500 "
				—4,500

During the 639 rounds on the 21st, there were 4 snaps, 15 explosions of caps, and 2 blank fires. After the first 20 shots, the stock in the vicinity of the lock began to open in consequence of the heat.

On the 22d, there were 9 explosions of caps, and 2 snaps. At the close of the firing on that day there was no indication of injury to the machinery of the piece, and no visible effect from the discharges, save the opening of the stock, which at this time reached about $\frac{1}{10}$ ths of an inch.

On the 23d, there were 2 snaps and 6 failures of caps. The expansion of the stock had increased, at the end of this day's firing, to nearly $\frac{2}{10}$ ths of an inch; the piece otherwise unaffected.

On the 25th, there were 5 snaps and 2 failures of caps. After a close examination of the parts, separately, at the close of the firing, the carbine had sustained no injury, other than that above noticed. The balls used in these discharges were kept wet, and 60 rounds were fired without a failure by caps that were immersed in water. These results would show the arm to be perfectly efficient in an ordinary rain storm, and lead to the conclusion that a slight shower would be of real service.

The observations of the board have demonstrated that the ammunition for the service of the carbine should not be made up in cartridges, but that the balls should be carried separately in a pouch, and the powder either in a flask or in blank cartridges. In loading, after the ball and powder are inserted, and while the plug is being forced to its place, the thumb should be placed on the charge hole.

After witnessing all the performances of the arm, the simplicity of its machinery, the ease with which it may be used, and the certainty of its effect, the board are fully of the opinion that it is well adapted to, and capable of performing all the requirements of the service. It is believed that the test to which the carbine has been subjected, could not be sustained by any similar arm now in use, without greatly injuring or deranging its machinery, or rendering the weapon entirely useless.

For the service of dragoons it is peculiarly well suited, and possesses many advantages over the carbine now employed. It may be made to assume a formidable character as an arm for artillerists, to which service it may be readily adapted. By giving to it a swivel bar, (in the same manner as the dragoons,) a complete union of artillery and infantry may be effected, by producing results arising from a combination of both, as a fire may be constantly kept up during the intervals at which time men are not engaged in serving the gun. It may also take the place of the sword, with which the musicians are now encumbered, thereby divesting them of the character of non-combatants, as it may be worn with equal ease, and is vastly superior to the sword in efficiency. It has claims on the score of economy in ammunition, 65 grains of powder being amply sufficient for the service charge. The ball being slightly larger than the calibre of the piece, it slugs through the bore; all windage is therefore destroyed, and the maximum effect of the powder produced.

The following alterations are suggested, as calculated to facilitate the use of the piece, and to add to its efficiency.

The inner or battery face of the cock should be concave, so as to leave an interval of $\frac{1}{16}$ th of an inch for the escape of the fragments of the cap.

The ramrod and wiper should form a component part of the arm; and a modification should also be made in the thumb-piece of the cock.

In conclusion, the board unhesitatingly recommend that Jenks's carbine be introduced into the service of the United States.

All of which is respectfully submitted.

M. M. PAYNE,
Major 2d artillery.

A. LOWD,
Capt. 2d reg't. artillery.

W. A. THORNTON,
Capt. of ordnance.

C. P. KINGSBURY,
2d lieut. ord. and rec.

FORT ADAMS, R. I., April 25, 1842.

Endorsement by Major General Scott.

I have read the within report with great interest, and concur in the conclusions of the board.

Respectfully submitted.

WINFIELD SCOTT.

MAY 9, 1842.

SECOND OFFICIAL REPORT ON JENKS'S CARBINE.

No. 2.

Proceedings of a board of officers assembled at Fort Adams, R. I., for the purpose of experiments on Jenks's carbine, in conformity to the following orders :

ADJUTANT GENERAL'S OFFICE,
Washington, June 24, 1842.

SIR: The Secretary of War directs that the experiment of Jenks's carbine, ordered to be made by a board of officers pursuant to "special order" No. 27, be continued and persevered in until the carbine shall be worn out, or rendered useless. You will therefore give the necessary instructions on the subject, and cause a careful registry to be kept of the number of times the piece shall have been fired, and note such other particulars as may seem to you to be important. The result of the continued experiment will be reported at the proper time, for the information of the War Department.

The carbine, after it shall have been rendered useless, will be sent to Mr. Jenks, at Springfield, Mass.

R. JONES,
Adjutant General.

COMMANDING OFFICER,
Fort Adams, R. I.

FORT ADAMS, R. I.,
July 5, 1842.

ORDER No. 16.

In obedience to instructions received from the Adjutant General's office, dated Washington, June 24th, 1842, the experiments on Jenks's carbine, ordered to be made at Fort Adams by a board of officers pursuant to special order No. 27, will be resumed to-morrow, and continue until the carbine shall be worn out, or rendered useless.

Captain A. Lowd, 2d artillery, First Lieutenant W. E. Aisquith, 1st artillery, Second Lieutenant L. Chase, 2d artillery, will constitute the board under whose direction the experiments will be made. The junior member will record the proceedings.

By order of Brevet Colonel Fanning.

H. J. HUNT,
Lieutenant Acting Adjutant.

The board commenced its operations at Fort Adams, and fired as follows :

July 7th, number of rounds	-	-	-	-	-	690
with ball and charge of 52 grs. of powder; this is considered sufficient for general service. The piece was cleaned at each 30 rounds. During this day 3 caps exploded.						

July 8, number of rounds fired, (2 caps exploded,)	-	-	570
" 9, number of rounds fired	-	-	450
" 11, number of rounds fired	-	-	600

1 cap exploded, 5 snaps from defective caps.

July 12, number of rounds fired	-	-	480
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Having in previous firings applied a drop of water occasionally to the slide, to make it work easily—during this days firing, 120 rounds were discharged without applying either water or oil.

Being satisfied that the lock performs with great certainty when good caps are used, as will also appear from report of the previous board, it is considered unnecessary to note an occasional failure.

July 13, number of rounds fired	-	-	600
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with a drop of water applied to the slide at every 10 rounds.

July 14, number of rounds fired	-	-	390
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" 15, number of rounds fired	-	-	300
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" 16, number of rounds fired	-	-	300
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with a drop of water applied to the slide at 5, 7, or 10 rounds, as it might require, and this continued to the termination of the experiments.

July 18, number of rounds fired	-	-	570
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" 19, number of rounds fired	-	-	300
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July 20, number of rounds fired	-	-	570
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" 22, number of rounds fired	-	-	330
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" 23, number of rounds fired	-	-	210
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" 25, number of rounds fired	-	-	300
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" 26, number of rounds fired	-	-	300
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During this day's firing a part of the *bridle* of the lock, (surrounding a screw,) broke.

July 27, number of rounds fired	-	-	180
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" 28, number of rounds fired	-	-	390
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" 29, number of rounds fired	-	-	390
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" 30, number of rounds fired	-	-	180
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Aug. 1, number of rounds fired	-	-	600
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" 2, number of rounds fired	-	-	360
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" 3, number of rounds fired	-	-	360
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" 4, number of rounds fired	-	-	420
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During this day's firing a part of the *bridle* of the lock broke, (surrounding a screw,) the part opposite, but connected with the previous break.

Aug. 5, number of rounds fired	-	-	473
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Total rounds fired by this board	-	-	10,313
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Total rounds fired by previous board	-	-	4,500
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Total by the carbine	-	-	14,813
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At the close of this day's firing, the *nipple* split at its muzzle, but remained in its place with the screw of it in good order. It being impossible to fire longer without inserting a new one, and presuming it was not intended any repairs should take place, the experiment ceased.

Towards the termination of the firing, the force of the *cock* was weakened, and it would with difficulty remain at "cock" or "half cock," owing

to the breaking of parts of the *bridle* before mentioned; this allowed the screw holding the *sear* to recede from the *tumbler*. The lock, with the above exception, was in its other parts serviceable. The springs were in good order, and the notches of the *tumbler* quite perfect. As more strength could be given the injured part by increasing the length of the *bridle* around the screw holes, such an addition would secure it against a similar injury.

The barrel inside appears smooth and serviceable, the chamber without any enlargement that can be perceived. The *slide* now works very easily from its constant wear, but still fits so close as not to permit the escape of smoke, or in any way to be considered as injured.

The stock remains entire and perfect, the enlargement or opening mentioned by the previous board remains, as then, without any increase.

In mentioning the parts of this lock, we have used the same terms as are applied to the musket-lock, from their position and action, although they differ materially in their formation.

With the repairs of the *nipple* and *bridle*, we should consider the carbine as still capable of sustaining a great number of discharges.

Respectfully submitted.

A. LOWD,

Captain 2d regiment artillery.

W. E. AISQUITH,

First lieutenant 1st artillery.

FORT ADAMS, R. I., August 6, 1842.

FORT ADAMS, 8th August, 1842.

GENERAL: I herewith forward the report of the board of officers charged with the experiments upon Jenks's carbine.

I have directed that it be sent back to him. We could have repaired it and have continued the experiment. But it was, no doubt, best that Mr. Jenks should himself see and understand wherein his gun first failed, as it would enable him to understand its faults, and the better to perfect his invention.

You will perceive that the signature of the youngest member of the board (Lieutenant Chase) is wanting to the report. On account of some pressing business, I gave him a few day's leave of absence, a day or two before the failure of the gun.

I have the honor to be, general, your most obedient servant,

A. C. W. FANNING,

Brevet Colonel commanding, Fort Adams.

Brigadier General R. JONES,

Adjutant General of the U. S. army, Washington, D. C.

[Endorsement by Major General Scott.]

This very remarkable report in favor of Jenks's carbine, showing its great durability, is respectfully laid before the Secretary.

WINFIELD SCOTT.

AUGUST 11, 1842.

No. 3.

REPORT OF THE "FRANKLIN INSTITUTE" OF PENNSYLVANIA.

The Committee on Science and Arts, constituted by the Franklin Institute of the State of Pennsylvania, for the promotion of the Mechanic Arts, to whom was referred for examination an improvement in Fire-arms, invented by Mr. William Jenks, of Springfield, Massachusetts, report :

That the improvement consists of a piston or plunger, fitting in a chamber in the breech of the piece, which is drawn back by a lever and several pieces of metal, so as to permit the ball and charge of powder to be put into the chamber through an opening in the upper part of the breech. After which, the lever being depressed, the piston is forced forward by the above mentioned pieces of metal, which constitute, by their position, a species of toggle-joint. When the charge has thus been forced home, the joints are a little beyond a straight line from the breech to the extreme point of action. It follows, as a necessary consequence, that the piston cannot be forced back by the discharge of the piece, and requires no fastening of any kind.

The committee are of opinion that the invention of Mr. Jenks is a simple, safe, and efficient improvement in the construction of fire-arms ; that it presents very little difference to the eye from guns of the ordinary construction, and is, as far as they perceive, free from all the objections which usually accompany breech loading, and possesses all its advantages.

By order of the committee :

WILLIAM HAMILTON, *Actuary.*

DECEMBER 13, 1838.

No. 4.

REPORT OF THE "MASSACHUSETTS CHARITABLE MECHANIC ASSOCIATION."

173. William Jenks, Chicopee Falls, Massachusetts. Seven rifles and one carbine.

231. E. F. Bunnell, Boston. A repeating rifle ; known as Chamberlain's patent.

297. Nichols & Childs, Conway, Massachusetts. Five rifles and two pistols on the same plan.

The attention of the committee was chiefly directed to Nos. 173, 231, 297 ; the remainder being exhibited rather as good specimens of work than for any new invention. On invitation of the committee, the proprietors of No. 173 and 297 made a trial with their respective pieces, and after a thorough examination of the peculiarities of each rifle, the committee were of opinion that the invention of Mr. Jenks is entitled to the preference over both the other specimens, and over any invention connected with fire arms which has fallen under their observation.

The distinguishing feature in these arms is the facility of loading them, combined with great simplicity and security of construction. While for a few moments it may be possible to discharge a rifle constructed on the

plan of Nichols & Childs,* in more rapid succession, yet it appears to the committee that in Jenks's rifle the manner of loading will enable the possessor of the weapon to discharge the same with uniform rapidity, and without a change of position, while it is apparent that after a discharge of six shots from Childs's rifle, there must be an interval in which the gun is of no more utility than one of the old pattern. On the trial in the presence of the committee, Mr. Jenks discharged his rifle at a mark twenty times in four minutes and two seconds, and Mr. Childs occupied five minutes and three seconds for the same number of shots.

Another advantage which the rifle of Mr. Jenks possesses is, that the most unpractised hand can use it with the same facility as the most skilful, and its construction is so safe that the danger arising from its use is no greater than that attached to all fire-arms.

The rifles Nos. 231 and 297 are of ingenious construction and merit attention; but it appears to the committee that there is wanting in them that simplicity and safety of construction, which would render them desirable for constant use. The committee could enlarge much more on the comparative merits of the respective pieces, but they believe they have said sufficient to warrant them in classing the specimens as follows:

173. William Jenks, patent No. 1. *A Gold Medal.*

No. 5.

From the Army and Navy Chronicle of May 21, 1842.

JENKS'S PATENT CARBINE.

In our paper of the 10th of February last, we gave a description of this weapon, and the reports made upon it by some of our mechanical and scientific associations. We now present the report of a board of army officers, convened for the purpose of making experiments before it should be adopted into the service. This report, it will be seen, is highly favorable, and "the board unhesitatingly recommend that Jenks's carbine be introduced into the service of the United States."

We can add nothing to the forcible recommendation of the board, derived from a thorough test of the weapon; but we can institute some comparisons, not embraced in the report, which will still further illustrate its utility, efficiency, and economy.

In 1837 experiments were made at West Point to determine the penetration of leaden balls in seasoned white oak.

In 1839 experiments were made at the Washington arsenal, with the same object in view.

A comparison of the results of these two experiments with those recently made with Jenks's carbine will show the decided advantage of the latter in range, penetration, and saving of powder.

For the result of these experiments, we are indebted to a very valuable work called the "Ordnance Manual," compiled by the ordnance board, and published in 1841, for the use of the officers of the United States army.

* Nichols & Childs's is a cylinder gun containing six charges, on the same principle as Colt's.

Penetration of leaden balls.

Experiment made at West Point in 1837.—Penetration in seasoned white oak.

Arm.	Charge.	Distance in yards.							Remarks
		3½	9	50	100	150	200	300	
Musket	grains	inch	inch	inch	inch	inch	inch	inch	*1 ball in 10 imbedded.
	134	2.00	1.60	1.43	1.00	0.66	0.55	0.00*	
	125	1.60							
	90	1.60							
Com'n rifle	92	2.10	1.80	1.43	0.94	0.65	9.29	0.00†	†Indentation 0.2 inches.
Hall's rifle	70	1.12	1.70	0.60	0.53	0.40	0.00‡	—	‡2 balls in 10 imbedded.

The musket fired at 9 yards distance, with a charge of 134 grains, 1 ball and 3 buckshot, gave for the ball a penetration of 1.15 inches; buck-shot 0.41 inches.

Penetration in a bundle of musket ball cartridge paper, (No. 1.)

Musket, with 134 grains, at 13½ yards, 653 sheets.

Common rifle, with 92 grains, at 13½ yards, 500 sheets.

Experiments at Washington Arsenal, in 1839.

PENETRATION IN SEASONED WHITE OAK.

Arm.	Charge.	Distance.	Penetration.	Remarks.
	Grains.	Yards.	Inches.	
Musket	144	5	3.00	} Arms loaded with new musket powder.
Common rifle	100	5	2.05	
Hall's rifle	100	5	2.00	
Hall's carbine, musket calibre	70	5	0.60	} Charges too great for service.
	80	5	0.80	
	90	5	1.10	
	100	5	1.20	
Pistol	51	5	0.725	

Jenks's carbine also possesses other advantages—simplicity, lightness, durability, and freedom from liability to accident.

1st. *Simplicity.*—Hall's carbine is made of 71 pieces, the United States musket of 56, Jenks's carbine of but 34.

2d. *Lightness*.—The United States musket, pattern of 1840, weighs 10½ lbs., Hall's carbine 7 lbs., and Jenks' carbine, complete, 6¼ lbs. [Writers in the British military periodicals, (we quote from memory, not having leisure to search for the original articles,) have been urging upon the attention of their government the expediency of reducing the weight of their muskets, which they contend is too heavy for soldiers to endure on long marches, without the addition of knapsack, and sometimes several day's rations. If our recollection is right, the British musket weighs 13 lbs. or more, and these writers propose a reduction to 10 lbs., or even less, without injury to its efficiency.]

3d. *Durability*.—By the report of the board it appears that Jenks's carbine was fired 4,500 times, and had sustained no injury other than the opening of the stock in the vicinity of the lock which had increased to nearly one-fifth an inch. At this stage of their proceedings the board were obliged to separate, two of their number being called off on other duty, leaving the third to continue the experiment of firing one of the carbines as long as it would bear firing. The inventor is of opinion that it will stand 20,000 discharges without injury. We are promised a continuation of the report of this part of the experiment, which we will give hereafter. One soldier fired about seven-eighths of the 4,500 discharges at Fort Adams, and expressed a belief that he could fire from 600 to 1,000 times a day without fatigue. During this trial the carbines were fired the first and second days 30 times, the third day 40 times, and the fourth day 50 times, without cleaning; and in no instance did the cone become so foul as to require cleaning. The carbine can be fired one hundred times without cleaning.

The lock is the most simple and perfect thing of the kind that has been invented, consisting only of eight pieces, three of which are screws. Its advantages are simplicity of construction; facility of repair, any black or whitesmith being competent to repair it if necessary; adaptation to arms now in use, without alteration of barrel, stock, or mounting; cheapness, the cost not being one-half that of the flint lock; certainty of fire, the cone or nipple going direct to the charge; and entire safety from injury from parts of the caps flying when exploded.

In the trial at Fort Adams more than 700 discharges were made without a mis-snap.

All to whom the lock has been submitted speak of it in the highest terms. One only made objection, and that was to its very simplicity.

Extract from the report of the joint board of officers to the honorable the Secretaries of War and Navy Departments, made in pursuance to instructions of the 29th January, 1845.

“2d. *With respect to Jenks's carbine*.—The board is of opinion that this carbine combines, in an eminent degree, the two great advantages attending arms loading at the breech, that of propelling the ball with great force, and that of being loaded rapidly and easily in situations where the use of the rammer is inconvenient; the latter consideration would recommend it for use in boat service, and in the tops of vessels, as well as in cavalry service.

The arrangements adopted by Mr. Jenks for effecting the above objects appear to the board to be ingenious, and in many respects well adapted to the purpose; the numerous trials heretofore made with this carbine seem to have shown that the apparatus possesses sufficient strength and security from accident in common practice, but whether it is entirely free from the objections which have been heretofore found to attend contrivance for loading at the breech, it is not in the power of this board to determine, as it is understood that a considerable number of these arms have been procured, and that they are now under trial in the hands of the troops, both of the army and navy, the board think that it would be unfair and unnecessary to form any decision as to their adaptation to military purposes, or to propose any definite action on the subject, until the results of those trials are known."

CHARLES STEWART,
United States Navy.

GEORGE M. BROOKE,
Brevet Brig. General, U. S. A.

GEORGE GIBSON,
Brevet Brig. General.

L. M. POWELL,
Com. United States Navy.

A. MORDECAI,
Captain Ordnance Department.

The undersigned, Secretary of the Department of War of the United States, hereby certifies that the within is a true copy of that part of the report of the joint board of officers appointed by the War and Navy Departments, which relates to "Jenks's carbine" for which he has obtained a patent from the United States, and that the said report has been accepted and ordered to be filed in the bureau of ordnance.

In testimony whereof, I have hereunto set my hand and caused the seal of the War Department to be

[L. S.]

affixed, this fourteenth day of February, one thousand eight hundred and forty-five.

WM. WILKINS,
Secretary of War.

I hereby certify that the within is a correct copy of that part of the report of a joint board of army and navy officers on file in this Department, which relates to "Jenks's carbine."

In testimony whereof, I have hereunto subscribed my name, and caused the seal of the Navy Department of the United States to be affixed, at the city of Washington, this fourteenth day of February, in the year of our Lord one thousand eight hundred and forty-five, and of the independence of the United States the sixty-ninth.

[L. S.]

J. Y. MASON,
Secretary of the Navy.

No. 6.

Certificate of officer in charge of the revenue marine.

BUREAU OF REVENUE MARINE, TREASURY DEPARTMENT,
Washington City, U. S., January 14, 1845.

This will certify, that the use of Jenks's patent carbine was introduced into the United States revenue marine about four years since.

From the testimony of the several commanders, they possess all the advantages set forth in the annexed report of the ordnance officers, viz : Great increased celerity and accuracy in firing, simplicity in construction and durability.

Their use in the above service has entirely superseded every other description of small arms.

ALEX. V. FRASER,
Captain Revenue Marine.

This will certify that Captain Alexander V. Fraser, whose signature appears in the above certificate, is the officer in charge of the Bureau of Revenue Marine, and his representations are entitled to full credence.

Given under my hand and the seal of the Treasury Department, this fourteenth day of January, in
[L. s.] the year of our Lord one thousand eight hundred and forty-five.

GEO. M. BIBB,
Secretary of the Treasury.

No. 7.

Letter from Hon. James M. Porter, late Secretary of War.

EASTON, PA., January 16, 1846.

SIR: I duly received yours of the 14th instant, and in reply have to say, that I have had in use for two years and upwards, one of Jenks's carbines, and have found that it answers all the purposes for which it was invented.

It shoots with as much precision as any other piece of its length that I have ever seen. It loads with great expedition, and requires no ramrod, which, to persons on horseback, is a great desideratum; and from its simplicity and firmness of construction, it is one of the most efficient, if not the most efficient, fire-arm which I have ever seen for the purposes for which carbines are used. It is, in fact, the only fire-arm loading at the breech which I should be willing to use in service, except it were muskets or rifles of the same construction.

The objections generally to fire-arms loading at the breech are, that they are liable to get out of order, and have *join's* or separate pieces of the barrel brought together at the chamber holding the powder; these, after a little use, become open, and the powder, when ignited, escapes there,

often endangering the eyes, if not the lives of those who use them. Fire-arms of the construction of those made by Mr. Jenks, I think, are not liable to these objections, as the chamber where the load is placed is surrounded by solid metal, and the moveable breech-pin passes so far into the barrel, past the place at which the load is inserted, that there is no danger of any escape of powder from that part of the piece.

From an examination of the piece, I feel assured that it must be durable, and not easily put out of repair, and that it is so simple in its construction that there is little danger from mismanagement by those using it.

Respectfully, yours,

J. M. PORTER.

Hon. JAMES A. BLACK,

U. S. H. R.

No. 8.

Letter from Commodore Stewart.

PHILADELPHIA, January 15, 1846.

SIR: In reply to your note of the 14th, (yesterday,) I can only say, that I have had one of Mr. Jenks's carbines about one year. I have not had occasion to use it much, but on such as I have put it to, I find its accuracy of fire, and safety as a fire-arm satisfactory. From its efficiency there can be no doubt of its adaptation to some military purposes. There is, however, one disadvantage which I have found it to possess, the liability of the plug or breech-pin to corrode and rust, thus rendering it difficult to move it backwards and forwards with the lever. This may, however, be readily remedied by composition plugs, or plated ones.

Very respectfully, I remain, sir, your obedient servant,

CHARLES STEWART.

To the Hon. JAMES A. BLACK,

Member of Congress, Washington.

No. 9.

Letter from Lieut. Hunter, U. S. Navy.

WASHINGTON CITY, January 16, 1846.

SIR: I have had the honor to receive your note of yesterday, wherein you express a desire that I should state my opinion of "Jenks's" carbine, based on my practical use of that arm.

In reply, I have to state, that for accuracy and certainty in firing, range of ball, convenience in loading, and the simple and strong construction of its parts, I consider it much the best of its description of small arms known to me.

I am, with great respect, your obedient servant,

WILLIAM W. HUNTER,

Lieutenant U. S. Navy.

Hon. JAMES A. BLACK,

House of Representatives of the United States.

No. 10.

Letter from Captain Thornton, of the Ordnance.

NEW YORK DEPOT, January 17th, 1846.

SIR: I have the honor to acknowledge the receipt of your favor of the 14th instant, and in answer to say, that Mr. W. Jenks was pleased to leave one of his carbines at this depot, since which time it has been made use of in firing, at various times—not over 20 shots—by persons calling here. I have no recollection of firing it myself, but have only been prevented from doing so by pressing duties. “As to its efficiency, accuracy, durability and safety as a fire-arm,” it is not in my power to say more in favor of the arm, than was said by a board of which I was a member at Fort Adams.

Mr. Jenks is in possession of a copy of the report then made.

Respectfully, I am, sir, your obedient servant,

M. A. THORNTON,

Captain of Ordnance, commanding depot.

HON. JAMES A. BLACK.

No. 11.

Letter from Captain Prince, of United States Revenue Marine.

U. S. R. MARINE STEAMER “SPENCER,”

New York Harbor, February 5, 1846.

SIR: The revenue marine schooner “Forward” and steamer “Spencer” are furnished with Jenks’s carbines during the time those vessels have been under my command. I have repeatedly made personal use of them, and am decided of opinion that they are the best small arm now in use for sea service; their range is equal to that of the rifle, and the direction about as good, as well as safe and durable; none of them as yet have required repair. For military purposes the only addition required are slings.

I beg leave to assure you that official duties have prevented me from answering your communication at an earlier date.

I have the honor to be, with great respect, your obedient servant,

HY. PRINCE, Jr.

Captain U. S. R. marine steamer “Spencer.”

The Hon. JAMES A. BLACK,

Washington.

No. 12.

Letter from P. P. Pitchlynn, of the Choctaw Nation.

WASHINGTON CITY, January 18, 1846.

SIR: In compliance with your request, I will state what my opinions are in relation to Mr. Jenks’s carbine. I bought one of them, and went

out on Saturday last to test its accuracy. I placed up a target in a bank of earth; the target constituted of a stone about four inches square and three inches thick, at the distance of nearly sixty yards. At the first fire, about one-fifth of the stone was left; and at the second fire I completely demolished the remaining piece. I then fired three other times at a small piece of stone in the same bank, which I removed from its position on the third fire, having placed one ball immediately above the stone, and two at the lower edge; and I have to state, that in all the five shots (which I made off-hand) not one was out of a circle of three inches diameter, and I have no doubt but I broke the centre twice in the five shots. I have carefully examined Mr. Jenks's carbines, having taken one to pieces, and seen all its parts, and from its construction I am compelled to say, that they are the most durable and efficient arms I have ever seen, and are particularly well adapted to our country, both for war and for hunting.

I never shot a rifle the five first shots that made so close shots as I made with the carbine.

I am, very respectfully, your obedient servant,

P. P. PITCHLYNN.

Hon. JAMES A. BLACK.

No. 13.

Letter from David Vann, of the Cherokee Nation.

WASHINGTON, January, 19, 1846.

SIR: I take pleasure in complying with Mr. Jenks's request as to the power and utility of his carbine. I purchased one about a year ago, and have used it a great deal. I think it the best gun I have ever used; for accuracy and range it has no superior.

Very respectfully, yours, &c.

DAVID VANN,
Of the Cherokee delegation.

To Hon. JAMES A. BLACK,
House, of Representatives.

No. 14.

Letter from Messrs. Fuller, of Washington.

WASHINGTON, January 19, 1846.

SIR: At the request of Mr. Jenks, inventor of the carbine in question, I will state to you my knowledge of the arm. I have shot the carbine on various occasions, and am satisfied that for accuracy, power, and range, it is the most perfect gun extant. I have tried it repeatedly at a mark, and have invariably beaten a rifle at the same distance. As a piece of mechanism I think it perfect in every point, and from the fact that no improvement or change has been made in the gun since its invention, I think that my opinion will be sustained.

My father, who will also endorse this letter, has used the carbine with both ball and *shot*, thinks it decidedly the best gun he ever used. He was present at a trial at the navy yard, (or arsenal,) and witnessed its superiority over all the guns tried on that occasion.

Very respectfully, yours, &c.,

E. H. FULLER.
A. FULLER.

To Hon. JAMES A. BLACK,
House of Representatives.

No. 15.

Letter from Captain Steen, of the U. S. Dragoons.

FORT TOWSON, (CONN.) *February 16, 1845.*

SIR: In compliance with the instructions of the Colonel, dated the 24th ultimo, I herewith transmit you a report on the adaptedness for the dragoon service of the Jenks's pattern carbine, twenty of which were furnished my company, 10 smooth and 10 rifles, last summer.

The carbine referred to is, in my opinion, totally useless in the hands of a dragoon, for the following reasons: First, in order to be loaded it must be held horizontally by the left hand, the reins of the hand in the same hand, the soldier gets a cartridge from his box and bites off the ball, (which has to enter the cylinder of the carbine first, and is, by the piston-rod or breech-pin, pushed forward;) after having bitten off the ball from the cartridge—at the same time holding in his left hand the reins and carbine, and in his right the powder of the cartridge—it is next to an impossibility to get the ball from his mouth in the cylinder. Secondly, I will take the carbine loaded; after placing the cap upon the tube, the hammer of the lock is, by the thumb, let down upon the cap; now in letting down the hammer, the thumb must inevitably reach the barrel before the hammer does the cap, for the reason that the only hold the thumb has upon the hammer is in the space of less than half an inch upon the semi-circular part of the hammer; and even allowing the soldier possibly to load the carbine on horse by the use of both hands, exclusively, the rear-rank man, in priming with the cap, ready for firing, would run the risk of shooting the man in his front. I have never permitted them to be fired by the rear-rank men, even on foot drills, on account of this very great danger; and on the first trial of them by myself and some of my best drilled men on horse, I found at once their unfitness for the dragoon, and the personal danger in their use.

On foot drills, I have placed the men, in whose hands these carbines were, in the front rank; after having fired three or four rounds of cartridges from them, the interior of the cylinder became so much besooted by the burnt powder that it was difficult to draw back or remove the rod in order to insert the ball and cartridge. These are the principal objections to the carbine. There is, however, one other objection with respect to the powder escaping between the ball and the barrel; this objection could, in my opinion, be remedied by making the ball to fit the interior of the cylinder precisely. On the whole I consider the carbine wholly

and totally unfit and ill-adapted for the dragoon; and I feel confident that had any officer of the ordnance department mounted his horse and attempted to load one of them with a cartridge, they would never have been sent to the several companies of dragoons.

The "North's pattern" carbine, furnished company H, are the best and most suitable of any which I have seen; the chamber is not opened by the flimsy and complicated spring, with which the 40 of "North's pattern" do, that were sent to my company, but by a flat lever in front of the guard, which is used with ease and facility by the thumb. The carbines of H company are brass mounted, and I should deem them very serviceable.

The Jenks's carbine in my company were condemned by Inspector General Croghan, by General Arbuckle, and Lieutenant Colonel Mason, in July last; Colonel Croghan advised by all means never to use them, and said they were totally unfit for mounted service.

I made a report of the same to the ordnance department in September last.

Very respectfully, your obedient servant,

E. STEEN,

Capt. 1st dragoons, com'dg. company E.

Lieut. R. S. TURNER,

Adj't 1st Dragoons, St. Louis, Mo.

No. 16.

Letter from Lieutenant Johnson, of U. S. Dragoons.

FORT WASHINGTON, February 3, 1845.

SIR: I enclose herewith some minutes of an examination of some of the men of company D with regard to Jenks's carbine; also, a statement of some target practice, &c. In answer to the letter of Col. Kearney of July 3d, 1843, addressed to Major Wharton, which called for a report on these carbines, I beg leave to say, that I consider both of these carbines inferior to the short carbine of Hall's pattern without bayonet, and with a flat chamber spring, which I have designated as Huger's pattern, as I believe, the chamber lever in question was contrived by that officer.

North's pattern does not differ from Captain Huger's, except as to the opening of the chamber, which is accomplished in a more clumsy manner, and with a lever so frail that several of them have given away already in the company. It will be seen, from the firing of the arms, that North's carbine has a longer point blank, but is not so accurate as Jenks's. The latter carbine ought to have a particular contrivance for loading, instead of cartridge, when it might appear to better advantage; but its getting foul in the windage between the barrel and the breech-pin, by the explosion escaping that way, is to my mind an insuperable objection. I took one out myself and loaded it by means of a powder flask with the utmost possible care, and, after discharging it six times, it took the whole force of my arm to drive the piston "home" with the lever.

I thought oil might obviate this, but it will not in some of the carbines; probably those where the windage is greatest. If this objection can be

obviated the gun will be a good one. One of Jenks's carbines bursted near the muzzle, on the march to the Wichelau mountains, when the owner was discharging it; probably there was mud in the muzzle, but the man averred that he had just cleaned it. One of them was lost by the ring breaking on the swivel-bar when the man was at full gallop after buffalo. They are praised very much for buffalo guns, from the facility of handling them at speed, being lighter than North's. Jenks's weighs 7, North's 8. As I have twenty of these carbines, and there is no manual for them, the fact of their being on hand interferes with the proper instruction of my men, as part are armed with both; it is therefore desirable that they should be replaced with the usual pattern until these carbines of Jenks's be rejected or adopted. I therefore request that 20 carbines of Huger's pattern, with swivel-bars and large tubes, be sent to the company.

Very respectfully your obedient servant,

ABRAM R. JOHNSTON.

Lieut. H. S. TURNER,

Adjutant 1st regiment dragoons,

St. Louis, Mo.

Statement of some of the men of company D, 1st Dragoons, on the use of Jenks's carbines.

Sergeant *R. J. Scott* objects to Jenks's carbine, as it cannot be loaded more than 4 or 5 times without hard pressure to drive home the piston in the breech; oiling the piston does not obviate this objection; prefers Hall's carbine with Captain Huger's mode of opening chamber.

Sergeant *C. C. Thompson* objects to Jenks's carbine for actual service, on account of the lever clogging on repeated loading; oiling the piston makes no difference in this respect.

Corporal *Jared S. Cranton* thinks Jenks's carbine the most serviceable carbine we have had; it is not so handy to load with the cartridges, but with ball separate from the powder it could be managed very well. The piston does not get foul unless the gun is carelessly loaded.

Private *Richard Freeman* thinks Jenks's carbine a very good one; has fired it as many as twenty times, and it always loaded free; it is much easier to clean than Hall's; thinks it much easier to load on horseback than Hall's.

Corporal *J. Clark* thinks, in many respects, Jenks's carbine is superior to any other; they are more easily kept in order, and are less liable to accident; they carry a ball with greater accuracy; thinks the piston will clog after being fired a few times; this is an objection which interferes with the rapidity of loading; prefers, on the whole, Hall's carbine, with Captain Huger's mode of opening the chamber. Oil will not prevent the piston from clogging.

Private *Thomas Hogan* thinks Jenks's the best shooting carbine, but has accidentally dropped grains of powder behind the piston under the lever, down by some "lines," and does not think they will answer for service; much prefers Captain Huger's pattern.

Private *Charles Moulle*. Jenks's carbine gets foul in the piston after about ten firings; after firing 7 times had to spit into the breech to get the piston home; prefers Hall's carbine with Captain Huger's chamber lever.

Remarks by William Jenks on the letters of Captain Steen and Captain Johnston.

The first objection that Captain Steen makes in his letter of February 16, 1845, is the *impossibility* of loading on horseback. To this my answer is, if the muzzle of the piece is held down, the ball will roll to its place, (as in tactics for the navy,) answering all the purpose of the improvement suggested by Capt. Steen, as the ball in that position fits the calibre tightly and prevents any powder from escaping past it. If Capt. Steen had once thought that by depressing the muzzle, the ball would roll down of itself, it would have saved the trouble of forcing it home by the piston rod, (*which he could not do.*) Like all arms loaded on horseback, the carbine is held in the hand with the bridle, at the time of loading, so that there can be no objection to the arm on *that* account.

After the carbine is loaded, and the cap put upon the nipple, the hammer can be let down with perfect ease, without the thumb touching the barrel, and is no more liable to shoot a man in the front ranks than any other arm. By the letter it appears that the carbine was charged with rifle or Hall's carbine charge; which is *one hundred* grains of powder, nearly *double* the charge for my carbine, the chamber being made to hold only sixty-five grains at the utmost. This, of course, was the reason why it required so much force to work the lever, so large a charge having to be *forced* into the barrel by the lever, and the consequent reaction of the charge upon the plug or piston.

In Captain Johnston's letter of the 3d of February, 1845, he states that one of the carbines was lost by the breaking of a swivel ring whilst in full speed after buffalo; and that the carbines were *very much praised* for buffalo guns from the *facility* of handling them at *full speed*. His objection to the arm is on account of the plug fouling, stating, however, that if that can be obviated it will be a good arm. This, of course, is obviated *by using the regular charge*.

There is also appended to his letter reports from non-commissioned officers and privates. The only objection made is the fouling of the plug which can be obviated as before stated. One states distinctly that he fired it as many as twenty times, and it always loaded *free*, and is much easier to clean than Hall's. That it can be loaded quicker than Hall's, and thinks it much easier to load on horseback. Another thinks that in many respects it is superior to any other; is more easily kept in order, and is less liable to accident, and can carry a ball with greater accuracy. His only objection to the arm is the fouling of the plug.

These arms were sent out to the first regiment of dragoons for trial without any instructions or tactics for their use, as mentioned by Capt. Johnston. They seem to have been loaded from a cartridge, which was never intended to be the manner of loading, as is shown in the directions issued by the Navy Department.

WM. JENKS.

Remarks by William Jenkins on the subject of Captain John and Captain

The first objection that Captain John makes is the point of delivery. It is the impossibility of loading on horseback. To this I answer that the muzzle of the piece is held down, the ball will fall in its place (as in fact for the navy) answering all the purposes of the improvement suggested by Capt. Hall, as the ball in that position fits the chamber tightly and prevents any powder from escaping past it. If Capt. Green had once thought that by depressing the muzzle the ball would fall down of itself it would have saved the trouble of forcing it home by the piston rod (which he could not do). Like all arms loaded on horseback the carbine is held in the hand with the trigger at the time of loading, so that there can be no objection to the arm on that account. Also the carbine is loaded and the cap put upon the night the hammer can be let down with perfect ease without the flange touching the barrel, and is no more liable to shoot a man in the front rank than any other arm. By the letter it appears that the carbine was charged with rifle or Hall's carbine charge, which is one hundred grains of powder, nearly double the charge for my carbine, the chamber being made to hold only sixty five grains at the utmost. This of course was the reason why it required so much force to work the lever, so large a charge having to be forced into the barrel by the lever, and the consequent reaction of the charge upon the plug or piston.

In Captain Johnston's letter of the 24 of February 1841, he states that one of the carbines was lost by the breaking of a screw which split in full speed after bullets, and that the carbines were very much damaged by bullets sent from the battery of handling them at the arsenal. His objection to the arm is on account of the plug touching the chamber, however, that if that can be avoided it will be a good arm. This of course is obvious, in using the regular charge.

There is also appended to his letter reports from non-commissioned officers and privates. The only objection made is the loading of the plug which can be avoided as before stated. One states distinctly that he fired it as many as twenty times, and it always loaded fast, and is much easier to clean than Hall's. That it can be loaded quicker than Hall's and that it is much easier to load on horseback. Another thinks that in many respects it is superior to any other, is more easily kept in order, and is less liable to accident, and can carry a ball with greater accuracy. The only objection to the arm is the loading of the plug.

These arms were sent out to the first regiment of dragoons for trial with one hundred and fifty carbines for their use, as mentioned by Capt. John. They seem to have been loaded from a cartridge, which was never intended to be the manner of loading, as is shown in the questions asked by the Navy Department.

WM. JENKINS.